



PATENT
ATTORNEY DOCKET NO. 50147/010001

Certificate of Mailing: Date of Deposit: August 10, 2007

I hereby certify under 37 C.F.R. § 1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated above and is addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Megan Kiley
Printed name of person mailing correspondence

Megan Kiley
Signature of person mailing correspondence

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Larsen et al.

Confirmation No.: 9168

Serial No.: 10/552,876

Art Unit: 1618

371(c) Date: June 8, 2006

Examiner: Melissa J. Perreira

Customer No.: 21559

Title: THORIUM-227 FOR USE IN RADIOTHERAPY OF SOFT TISSUE DISEASE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants submit the references listed on the enclosed Form PTO-1449, copies of which are enclosed, with the exception of U.S. patents, U.S. patent application publications, and U.S. patent applications. A copy of a search report from a corresponding international application is also enclosed.

Under 35 U.S.C. § 120, this application relies on the earlier filing date of application serial number U.S. Serial No. 10/421,244, which was filed on April 23, 2003.

The following references were submitted to and/or cited by the Office in the prior

application and, therefore, copies of these references are not provided for this application:

WO 01/60417

WO 02/05859

Feinendegen and McClure, "Alpha-emitters for medical therapy – workshop of the United States Department of Energy," Denver, CO (May 30-31, 1996), *Radiat. Res.* 148(2):195-201 (1997)

Larsen et al., "Treatment of skeletal metastases with alpha emitting ^{223}Ra : blood clearance pattern in patients with advanced breast and prostate cancer," *J. Nucl. Med.* (Proceedings of the SNM 49th Annual Meeting), Abstract No. 580:160P (2002)

Mausner and Srivastava, "Selection of radionuclides for radioimmunotherapy," *Med. Phys.* 20(2):503-9 (1993)

McClure and Feinendegen, United States Department of Energy Report No. DOE/NE-0116 from "Alpha emitters for medical therapy: second bi-annual workshop," Toronto, Canada (June 4-5, 1998), pp. 1-25 (June 1998)

Muggenburg et al., "The biological effects of radium-224 injected into dogs," *Radiat. Res.* 146(2):171-86 (1996)

Müller, "Studies on short-lived internal α -emitters in mice and rats: Part II. ^{227}Th ," *Int. J. Radiat. Biol.* 20(3):233-43 (1971)

Wilbur, "Potential use of alpha emitting radionuclides in the treatment of cancer," *Antibody Immunoconj.* 4(1):85-96 (1991)

Submission of this statement is not a representation that a search has been made, nor is the inclusion of information in this statement an admission that the information is material to patentability.

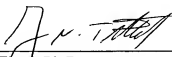
This statement is being filed before the receipt of a first Office action on the merits.

If there are any charges or any credits, please apply them to Deposit Account

No. 03-2095.

Respectfully submitted,

Date: 10 August 2007



Jan N. Tittel, Ph.D.
Reg. No. S2,290

Clark & Elbing LLP
101 Federal Street
Boston, MA 02110
Telephone: 617-428-0200
Facsimile: 617-428-7045



10552876 - GAU:

Sheet 1 of 3

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No.	50147/010001
		Serial No.	10/552,876
		Applicant	Larsen et al.
		371(c) Date	June 8, 2006
		Group	1618
(37 C.F.R. § 1.98(b))		IDS Filed	August 10, 2007

U.S. PATENT DOCUMENTS			
Examiner's Initials	Document Number	Publication Date	Patentee or Applicant
	5,428,154	Jun. 27, 1995	Gansow et al.
	6,083,477	Jul. 4, 2000	Goldenberg
	6,592,843	Jul. 15, 2003	Larsen et al.
	6,635,234	Oct. 21, 2003	Larsen et al.
	6,740,304	May 25, 2004	Larsen et al.
	7,056,275	Jun. 6, 2006	Larsen et al.
	US 2001/0008625	Jul. 19, 2001	Larsen et al.
	US 2001/0048914	Dec. 6, 2001	Larsen et al.
	US 2003/0166989	Sep. 4, 2003	Larsen et al.
	US 2003/0206857	Nov. 6, 2003	Larsen et al.
	US 2003/0228256	Dec. 11, 2003	Inverardi et al.
	US 2004/0009955	Jan. 15, 2004	Larsen et al.
	US 2004/0184990	Sep. 23, 2004	Larsen et al.
	US 2004/0208821	Oct. 21, 2004	Larsen et al.
	US 2006/0135842	Jun. 22, 2006	Larsen et al.

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION				
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Translation (Yes/No)
	WO 01/39806	Jun. 7, 2001	WIPO	
	WO 01/60417	Aug. 23, 2001	WIPO	

EXAMINER	/Melissa Perreira/	DATE CONSIDERED	09/03/2009
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.			

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.P./

Sheet 2 of 3

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No. Serial No. Applicant 371(c) Date Group IDS Filed	50147/010001 10/552,876 Larsen et al. June 8, 2006 1618 August 10, 2007
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
(37 C.F.R. § 1.98(b))			

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION				
	WO 01/66155	Sep. 13, 2001	WIPO	
	WO 02/05859	Jan. 24, 2002	WIPO	
	WO 2004/043487	May 27, 2004	WIPO	

OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)	
	Abbatt, "History of the use and toxicity of thorotrast," <i>Environ. Res.</i> 18(1):6-12 (1979).
	Charlton et al., "Theoretical treatment of human haemopoietic stem cell survival following irradiation by alpha particles," <i>Int. J. Radiat. Biol.</i> 74(1):111-8 (1998).
	Copy of the International Preliminary Report on Patentability for PCT/GB2004/001654, dated August 17, 2005.
	Copy of the International Search Report for PCT/GB2004/001654, mailed August 4, 2004.
	Copy of the Written Opinion of the International Search Authority for PCT/GB2004/001654, dated August 4, 2004.
	Deal et al., "Improved in vivo stability of actinium-225 macrocyclic complexes," <i>J. Med. Chem.</i> 42(15):2988-92 (1999).
	Feinendegen and McClure, "Alpha-emitters for medical therapy - workshop of the United States Department of Energy," Denver, CO (May 30-31, 1996), <i>Radiat. Res.</i> 148(2):195-201 (1997).
	Geerlings et al., "The feasibility of ²²⁵ Ac as a source of α-particles in radioimmunotherapy," <i>Nucl. Med. Commun.</i> 14(2):121-5 (1993).
	Henriksen et al., "Evaluation of potential chelating agents for radium," <i>Appl. Radiat. Isotopes</i> 56(5):667-71 (2002).
	Horak et al., "Radioimmunotherapy targeting of HER2/neu oncoprotein on ovarian tumor using lead-212-DOTA-AE1," <i>J. Nucl. Med.</i> 38(12):1944-50 (1997).
	Kennel et al., "Evaluation of ²²⁵ Ac for vascular targeted radioimmunotherapy of lung tumors," <i>Cancer Biother. Radio.</i> 15(3):235-44 (2000).
	Kolbert et al., "Parametric images of antibody pharmacokinetics in B1213-HuM195 therapy of leukemia," <i>J. Nucl. Med.</i> 42(1):27-32 (2001).
	Kozak et al., "Bismuth-212-labeled anti-Tac monoclonal antibody: α-particle-emitting radionuclides as modalities for radioimmunotherapy," <i>Proc. Natl. Acad. Sci. USA</i> 83(2):474-8 (1986).

EXAMINER /Melissa Perreira/	DATE CONSIDERED 09/03/2009
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.P./

Sheet 3 of 3

SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No.	50147/010001
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Serial No.	10/552,876
		Applicant	Larsen et al.
		371(c) Date	June 8, 2006
		Group	1618
(37 C.F.R. § 1.98(b))		IDS Filed	August 10, 2007

OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)	
	Larsen et al., "α-Particle radiotherapy with ²¹¹ At-labeled monodisperse polymer particles, ²¹¹ At-labeled IgG proteins, and free ²¹¹ At in a murine intraperitoneal tumor model," <i>Gynecol. Oncol.</i> 57(1):9-15 (1995).
	Larsen et al., "Treatment of skeletal metastases with alpha emitting ²²³ Ra: blood clearance pattern in patients with advanced breast and prostate cancer," <i>J. Nucl. Med. (Proceedings of the SNM 49th Annual Meeting)</i> , Abstract No. 580:160P (2002).
	Mausner and Srivastava, "Selection of radionuclides for radioimmunotherapy," <i>Med. Phys.</i> 20(2):503-9 (1993).
	McClure and Feinendegen, United States Department of Energy Report No. DOE/NE-0116 from "Alpha emitters for medical therapy: second bi-annual workshop," Toronto, Canada (June 4-5, 1998), pp. 1-25 (June 1998).
	McDevitt et al., "Tumor therapy with targeted atomic nanogenerators," <i>Science</i> 294(5546):1537-40 (2001).
	Milenic et al., "In vivo comparison of macrocyclic and acyclic ligands for radiolabeling of monoclonal antibodies with ¹⁷⁷ Lu for radioimmunotherapeutic applications," <i>Nucl. Med. Biol.</i> 29(4):431-42 (2002).
	Muggenburg et al., "The biological effects of radium-224 injected into dogs," <i>Radiat. Res.</i> 146(2):171-86 (1996).
	Müller, "Studies on short-lived internal α-emitters in mice and rats: Part II. ²²³ Th," <i>Int. J. Radiat. Biol.</i> 20(3):233-43 (1971).
	Printout of Supplementary Material (4 pages) from McDevitt et al., "Tumor therapy with targeted atomic nanogenerators," <i>Science</i> 294(5546):1537-40 (2001).
	U.S. Patent Application No. 10/588,839 (Salberg et al.), filed Aug. 8, 2006.
	U.S. Patent Application No. 11/665,197 (Larsen et al.), filed Apr. 12, 2007.
	Wilbur, "Potential use of alpha emitting radionuclides in the treatment of cancer," <i>Antibody Immunoconj.</i> 4(1):85-96 (1991).
	Zalutsky et al., "High-level production of α-particle-emitting ²¹¹ At and preparation of ²¹¹ At-labeled antibodies for clinical use," <i>J. Nucl. Med.</i> 42(10):1508-15 (2001).

EXAMINER /Melissa Perreira/	DATE CONSIDERED 09/03/2009
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.P./